

Work Order ID 81533

81533

Page 1

March-15-12 10:29:08 AM

Item ID: D3196-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Bar
 Start Date: 15/03/2012 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 29/03/2012 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: MLJ Date: 12/03/15 Tooling: Date: Run Start ***NR1***
 QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3196	Rev C								
100	BAND SAW	0.00							
100									
Bandsaw	Memo	0.00							
Jeaspa Bandsaw	Cut blank: (0.75" x 1.50") x 26.200" long Bar								
110	HAAS CNC VERTICAL MACHINING #1	0.00							
110									
HAAS 1	Memo	0.00							
HAAS CNC vertical machine #1	1-Machine D3196-1 as per Folio FA339 and Dwg D3196Identify as D3196-12-Debur								
120	QC2- Inspect parts off machine FAI/FAIB	0.00							
120									
QC	Memo	0.00							
Quality Control									

SL 12/03/27

SL 12/03/28

SL 12/03/28

(4) 4

4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 81533

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Page 2

March-15-12 10:29:08 AM

Item ID: D3196-1

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bar

Start Date: 15/03/2012 Start Qty: 4.00

4

Cust Item ID:

Required Date: 29/03/2012 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC8- Inspect parts - second check

0.00

130

QC

Memo

0.00

Quality Control

BA 12/03/29

4

0

140

Chemical Conversion Coat per QSI005 4.1

0.00

140

HandFinish

Memo

0.00

Hand Finishing

4

0

12/03/29

150

Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3

0.00

150

Powdercoat

Memo

0.00

Powder Coating

START TIME:

7h15

OVEN TEMPERATURE:

m117338

7h45 FINISH TIME:

320°F

4

0

12/03/30

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Page 3

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Revision ID:

Item Name: Bar

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Cust Item ID:

Required Date: 29/03/2012 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

QC3- Inspect Part Finish

0.00

160

QC

Memo

0.00

Quality Control

H BL 12-3-30

170

Identify as per dwg & Stock Location **S 260** 0.00***170***

Packaging

Memo

0.00

Packaging

4x SP 12-03-30

180

QC21- Final Inspection - Work Order Release

0.00

180

QC

Memo

0.00

Quality Control

12/4/2012

12-03-30

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____
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DART AEROSPACE LTD		Work Order:	81533
Description: Bar		Part Number:	D3196-1
Inspection Dwg: D3196 Rev: C		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
26.094	+/-0.010	26.094	✓		m-tape	
4.045	+/-0.010	4.045	✓		Vern	SL-1
18.003	+/-0.005	18.003	✓		m-tape	
0.750	+/-0.005	.751	✓		Vern	
1.500	+/-0.010	1.501	✓		-	
Ø0.344	+0.006/-0.001	.344	✓		-	
Ø0.660 x 100°	+0.008/-0.001 x 0.5°	.660x100°	✓		-	
0.060 x 45°	+/-0.010 x 0.5°	.065x45°	✓		-	
0.750	+/-0.010	.754	✓		-	
0.250	+/-0.010	.249	✓		-	
3.495	+/-0.010	3.495	✓		-	
9.000	+/-0.010	9.000	✓		m-tape	
16.844	+/-0.010	16.844	✓		-	
21.498	+/-0.010	21.498	✓		-	
R0.125	+/-0.010	.125	✓		R-G	
1.1 00	+/-0.010	1.100	✓		Vern	SL-1
R0.125	+/-0.010	.125	✓		R-G	
0.444	+/-0.010	.443	✓		Vern	SL-1

Measured by: SL	Audited by: BA	Prototype Approval:	N/A
Date: 12/03/28	Date: 12/03/29	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.04.20	New Issue	KJ/RF	
B	06.10.24	Dwg Rev. updated	KJ/JLM	
C	07.03.21	Dimensions updated per Dwg rev. C	KJ/JLM	BE

W/O:		WORK ORDER CHANGES					
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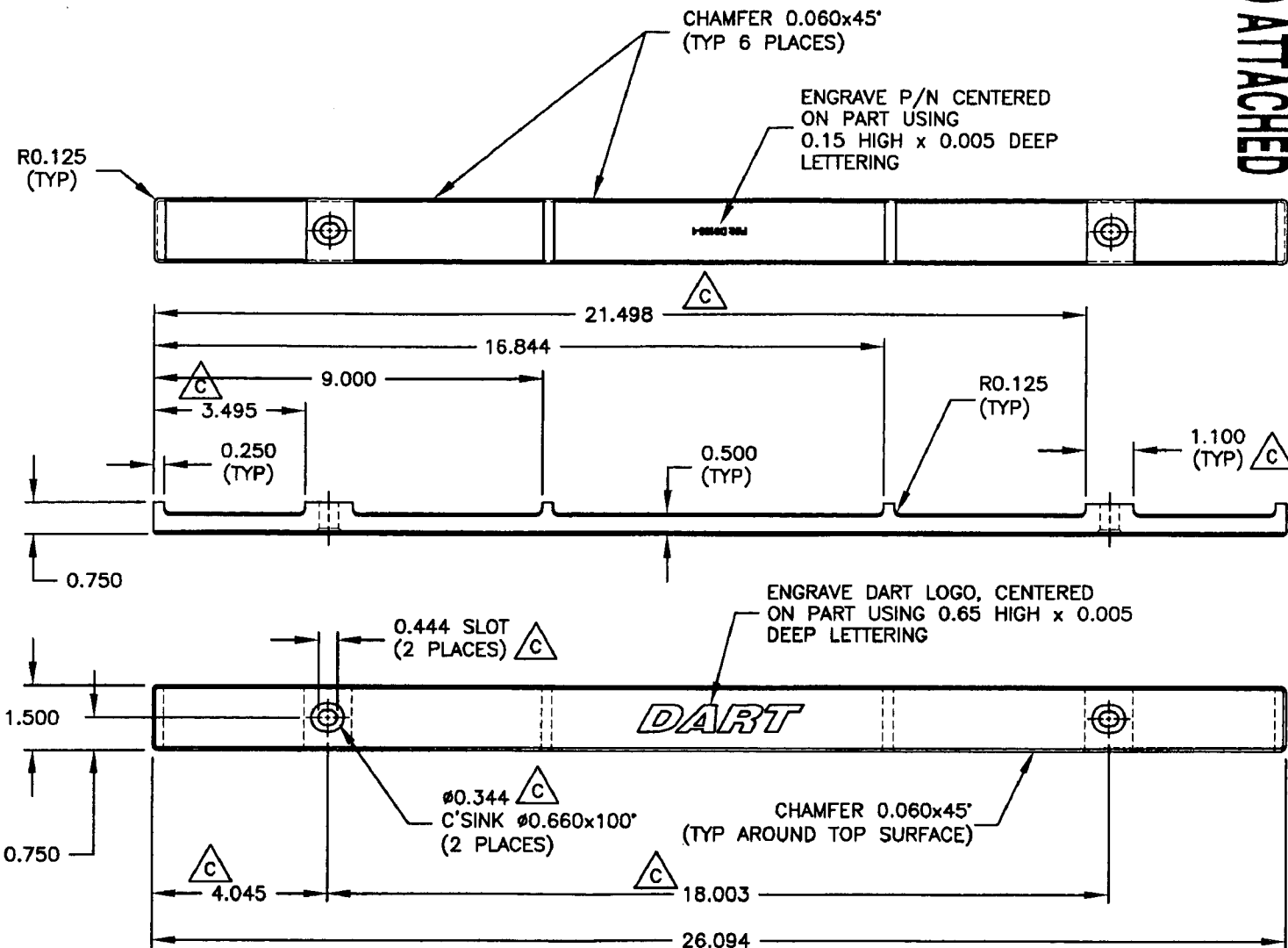
NOTE: Date & initial all entries



RELEASED
06.10.31

DEO ATTACHED

DESIGN	DRAWN BY	DART AEROSPACE LTD	REV. C
99	13	HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	SHEET 1 OF 3
PH	13	D3196	
DATE	TITLE	SCALE	
06.10.31	BAR	1:4	
A	03.06.25	NEW ISSUE	
B	06.09.25	ADD D3196-5	
C	06.10.31	ADD SLOTS ON -1; REMOVED -5	



D3196-1 BAR

- 1) MATERIAL: 6061-T6/T651 ALUMINUM (QQ-A-200/8 OR QQ-A-225/8) (REF DART SPEC. M6061T6B)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT GREY SANDTEX (4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 81533 MCT
12/03/15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

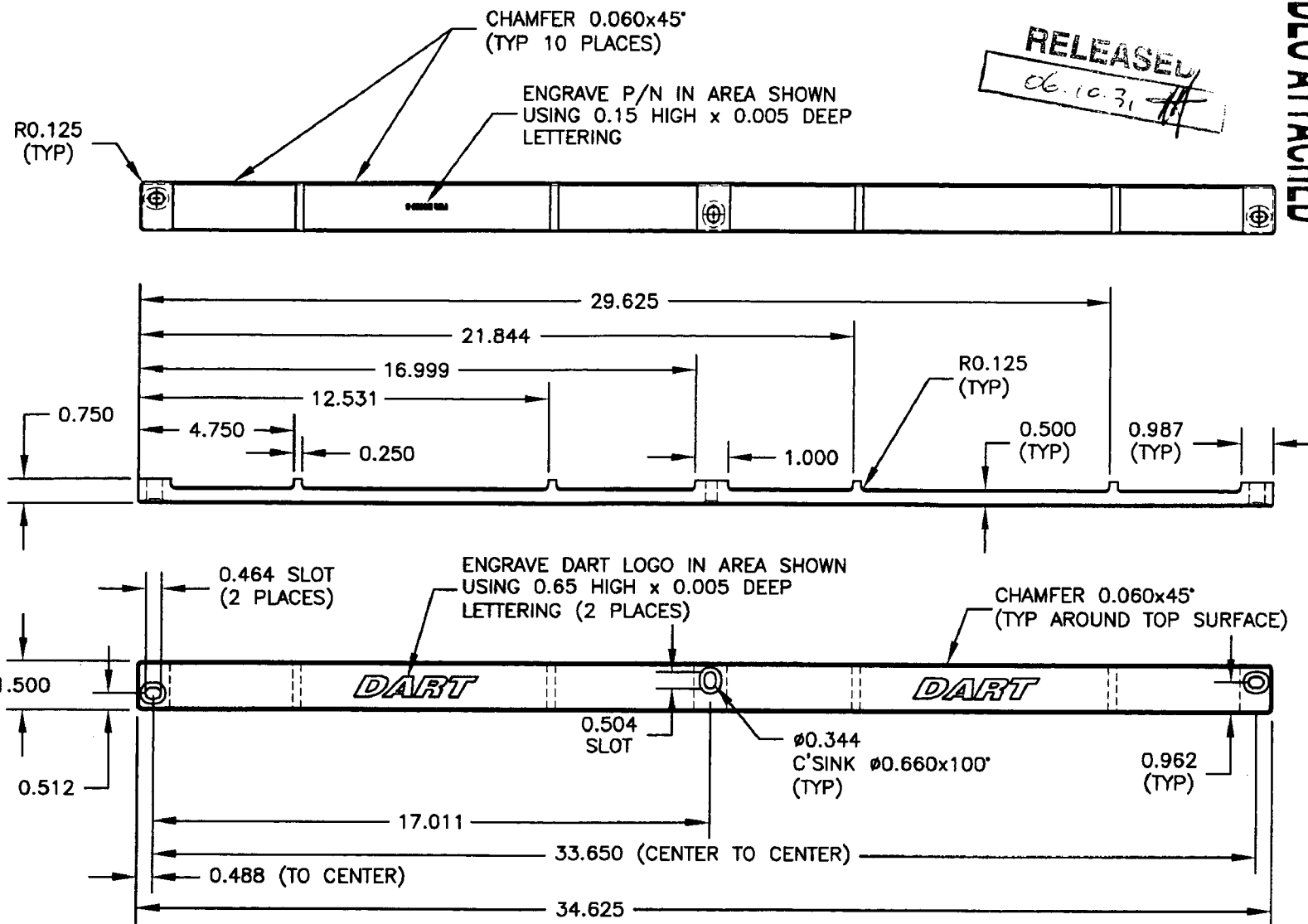
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

81533

DART**DETACHED**RELEASED
06.10.31

DESIGN	QC	DRAWN BY	HA	DART AEROSPACE LTD HAMKESBURY, ONTARIO, CANADA
CHECKED	PH	APPROVED	HA	REV. C
DATE	06.10.31	DRAWING NO.	D3196	SHEET 2 OF 3
TITLE	BAR	SCALE	1:5	

**D3196-3 BAR**

- 1) MATERIAL: 6061-T6/T651 ALUMINUM (QQ-A-200/8 OR QQ-A-225/8)
(REF DART SPEC. M6061T6B)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT GREY SANDTEX (4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

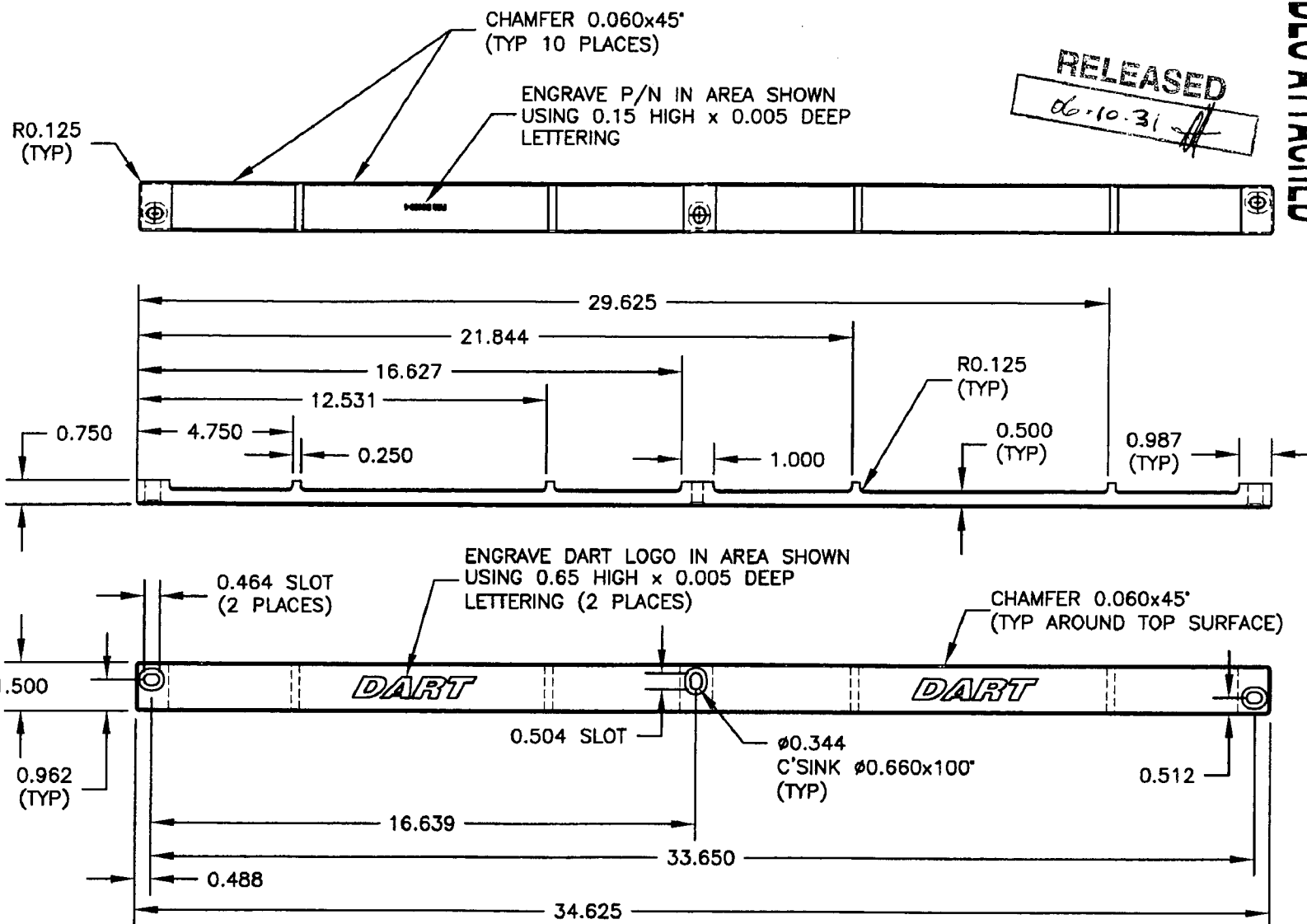
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

81533

DART**DEO ATTACHED**RELEASED
06-10-31

DESIGN	DRAWN BY	DART AEROSPACE LTD
CHECKED AH	APPROVED [Signature]	HAWKESBURY, ONTARIO, CANADA
DATE 06.10.31	DRAWING NO. D3196	REV. C
	TITLE BAR	SHEET 3 OF 3
		SCALE 1:1

**D3196-4 BAR**

- 1) MATERIAL: 6061-T6/T651 ALUMINUM (QQ-A-200/8 OR QQ-A-225/8)
(REF DART SPEC. M6061T6B)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT GREY SANDTEX (4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DRAWING NO. D3196	TITLE BAR	REV. C	DART AEROSPACE LTD ENGINEERING ORDER	D.E.O. NO. D3196-C-1	SHEET NO. SHEET 1 OF 2	SCALE NTS
DRAWN <i>ASS</i>	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DE APPR. <i>[Signature]</i>		
DATE 08.08.27	DATE 08.08.28	DATE 08.08.29	DATE 08.08.29	DATE 08.09.04		

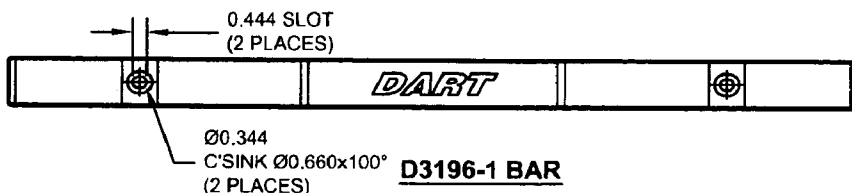
SHEET 1 MODIFY SLOT DIMENSIONING ON D3196-1 AS SHOWN:

IS:



D3196-1 BAR

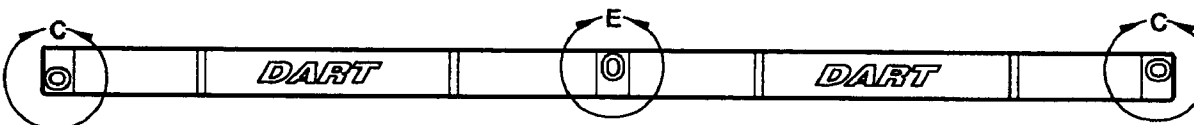
WAS:



D3196-1 BAR

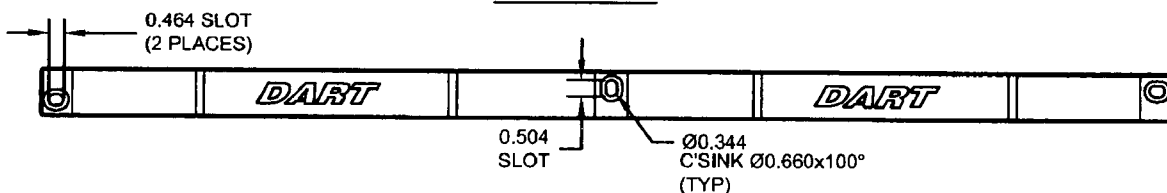
SHEET 2 MODIFY SLOT DIMENSIONING ON D3196-3 AS SHOWN:

IS:



D3196-3 BAR

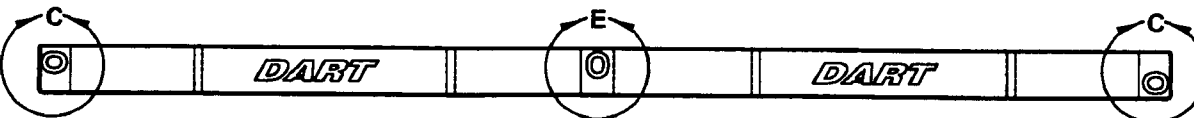
WAS:



D3196-3 BAR

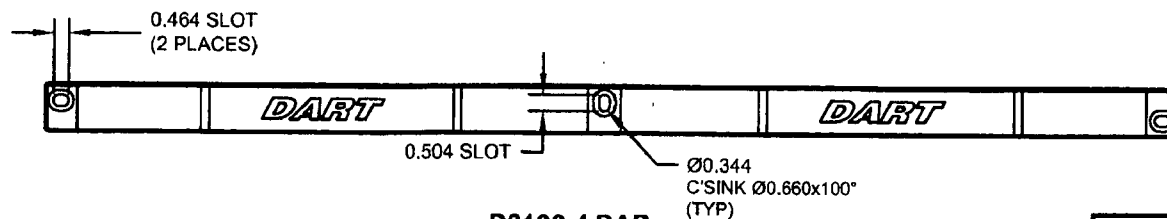
SHEET 3 MODIFY SLOT DIMENSIONING ON D3196-4 AS SHOWN:

IS:



D3196-4 BAR

WAS:



D3196-4 BAR

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

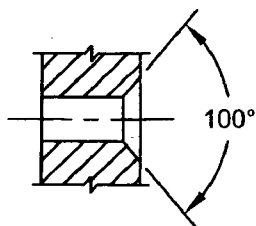
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

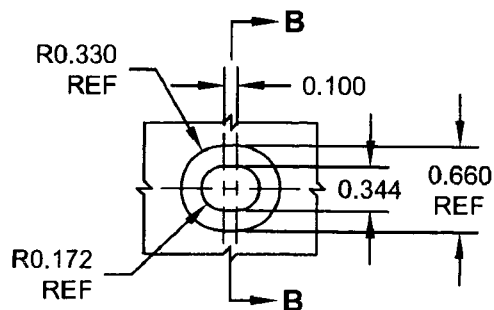
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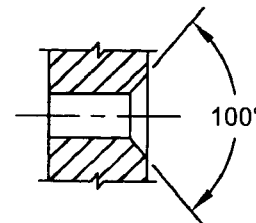
DRAWING NO. D3196	TITLE BAR	REV. C	DART AEROSPACE LTD ENGINEERING ORDER	D.E.O. NO. D3196-C-1	SHEET NO. SHEET 2 OF 2	SCALE NTS
DRAWN <i>ASS</i>	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DE APPR. <i>[Signature]</i>		
DATE 08.08.27	DATE 08.08.28	DATE 08.08.29	DATE 08.08.29	DATE 08.09.04		



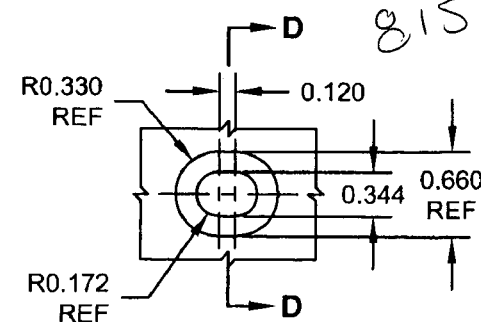
SECTION B-B



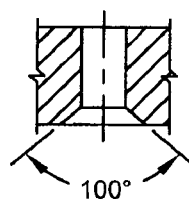
DETAIL A



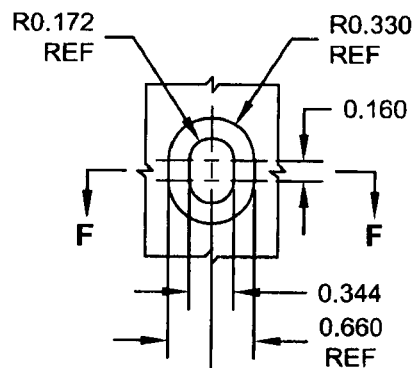
SECTION D-D



DETAIL C



SECTION F-F



DETAIL E

NOTE: THIS CHANGE HAS BEEN DONE TO CLARIFY SLOT DIMENSIONS ONLY. NO CHANGES HAVE BEEN MADE TO THE PARTS
SEE NCR 08-051 FOR FURTHER INFORMATION
ALL OTHER INFORMATION REMAINS UNCHANGED

W/O:		WORK ORDER CHANGES					
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